

McLane (J. W.) *al*

THE SLOANE MATERNITY HOSPITAL.

REPORT ON THE FIRST SERIES OF ONE THOUSAND
SUCCESSIVE CONFINEMENTS FROM JANUARY
1st, 1888, TO OCTOBER 1st, 1890.

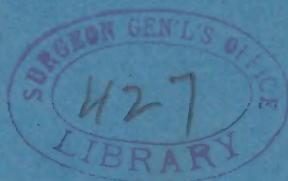
BY

JAMES W. McLANE, M.D.,

Professor of Obstetrics in the College of Physicians and Surgeons, New York;
Physician to the Hospital.

presented by the author

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OF WOMEN AND CHILDREN, Vol. XXIV., No. 4, 1891.]



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FROM

JANUARY 1ST, 1888, TO OCTOBER 1ST, 1890.

THE Sloane Maternity Hospital of the College of Physicians and Surgeons of New York is situated at the corner of Tenth avenue and 59th street. It was erected in 1886 and 1887 by William D. Sloane, Esq., whose wife, a daughter of the late William H. Vanderbilt, endowed the institution by making all its beds free in perpetuity. It was opened January 1st, 1888, for the reception of patients, and up to October 1st, 1890, 1,000 women have been confined in its wards. As it has been pronounced by many physicians, both in this country and in Europe, a model lying-in hospital, and as its reputation is as yet in its infancy, a short description of the

building and the management of the service may not be out of place.

Its dimensions are sixty-five feet by seventy-five. It is of three stories and an attic. It is built of brick, with mouldings of granite and terra-cotta, and its construction is fire-proof throughout. The flooring of the halls and wainscoting of the stairways are of white marble; the flooring of the wards and operating rooms is of white vitrified tiles. The surfaces of the walls are in hard finish and painted white.

In the basement are located the laundry, the kitchen, the servants' dining room; the coal chamber and fan for warming and ventilation; a bath room where newly admitted patients are thoroughly cleansed before going to the wards; and a room fitted with lockers for the safe-keeping of the clothing worn by patients on admission.

On the first floor are the rooms of the house physician, the assistant house physician, and the matron; a reception room, dining room for the staff, manager's room, and a large examination room.

On the second floor there are three wards, one containing nine beds, the other two four beds each; a delivery room, sleeping rooms for the nurses, and the drug room; also a dining room for women awaiting confinement.

On the third floor there are three wards similar to those on the second, a delivery room, the apartment of the principal of the Training School, two isolating rooms for patients requiring separation from the rest, and sleeping rooms for ward nurses. The total number of beds is thirty-nine. In the attic are the rooms of the house servants.

The warming and ventilation of the building are provided for by a fan which drives the air, warmed by steam-heated coils, through ducts to every part of the house. Under a moderate speed of the fan engine 580,000 cubic feet of air are supplied to the wards per hour.

The bath rooms, sinks, and water closets are all situated in the northeast corner of the building, removed as far as possible from the wards and special delivery rooms, in which there are no pipes, not even for the supply of water.

The lying-in wards are used in rotation. Each one, having been occupied by four patients, is thoroughly cleaned, the

furniture washed with a solution of carbolic acid, and left unoccupied, with open windows, for several days.

Patients awaiting confinement are kept in wards by themselves, and separate from the puerperal women. On entering the hospital each patient is obliged to take a full bath under the supervision of a nurse, plenty of soap being used and special attention given to the hair, which is thoroughly shampooed with delphinium or ether, or both; or, if very dirty, with bichloride solution. A vaginal douche of bichloride (1:5,000) is given and a rectal enema of soapsuds. The woman is then attired in clean clothes, the property of the hospital; her own garments being placed in a bag and subjected to a heat of 250° F. in a small room specially designed for this purpose, and afterward stored in a locker in the basement. This arrangement is found very useful in protecting the wards from vermin.

The patient is then permitted to enter the ward set apart for waiting women, and allowed the following diet: Breakfast, oatmeal or hominy, tea or coffee with milk and sugar, bread and butter. Dinner, meat, vegetables, bread and butter, dessert, soup three times a week. Supper, tea with milk and sugar, bread and butter, stewed or fresh fruit.

All confinements take place in the special delivery rooms, which are located conveniently near the wards. Each of these rooms contains a table of special design (see Fig. 1), upon which all deliveries take place. Its length is five and a half feet; breadth, twenty-seven inches; height, thirty inches. It is admirably adapted for operative procedures. The top is divided into two parts; the one on which the patient's head rests being fastened to the legs of the table, and united by hinges to the other part, which is movable. By means of a screw near the lower end, the foot of the table can be raised to any height desired, thus providing for the instant lowering of the patient's head in case of hemorrhage. When covered with a double blanket and sheet, it forms a very comfortable bed. The bedding is protected by water-proof paper, which has been found an excellent substitute for the ordinary india-rubber sheet, and is used on all the beds in the wards. It is a soft brown paper, very flexible, covered with a thin coating of tar, over which is spread a single layer of gauze, which

gives it the appearance and feel of cloth. It is made for the hospital by Messrs. Heald Brothers, 59 Knightrider street, London, and imported in rolls of one hundred yards each, fifty inches wide. Its cost is about six cents a yard, free of duty. Whenever soiled, it is removed from the beds and burned.

Injectons are given by means of fountain syringes. These are of agate ware, specially made for the hospital. Each can has a capacity of two quarts. Near the bottom of the vessel is a projecting nipple, over which is fitted a soft-rubber tube joined at the other end to a glass nozzle for insertion in the

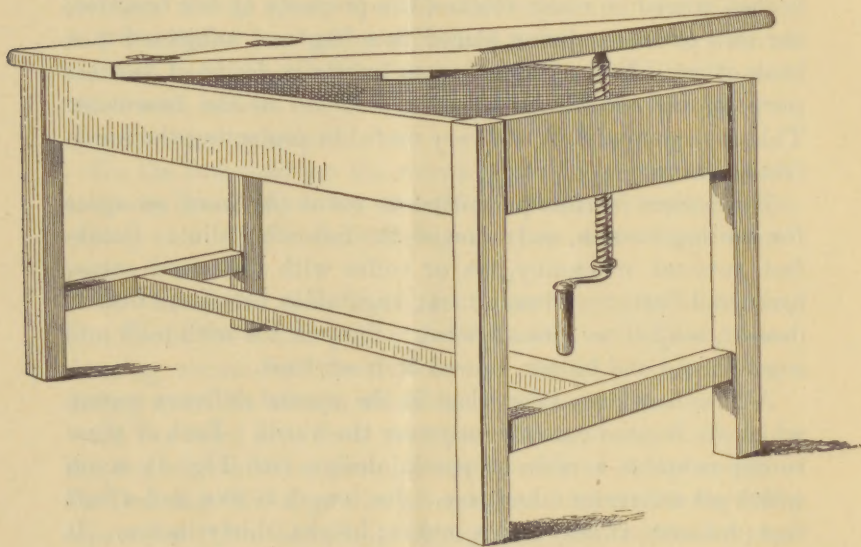


FIG. 1.—Delivery table.

vagina or uterus. When not in use, these glass tubes are kept in jars containing a solution of bichloride.

The house staff is composed of a resident physician, an assistant physician, a principal of the Training School for Nurses, and an assistant. By an arrangement with the New York Hospital, nurses are received regularly every two months from that institution, and given an obstetrical training before their graduation. This plan works admirably, and the patients have the benefit of intelligent and skilful nursing.

CONDUCT OF LABOR.

When a patient is taken in labor, she is transferred from

the waiting ward to the delivery room, where a vaginal douche and rectal enema are given early in the first stage.

Chloroform is given when necessary in the latter part of the second stage—to the obstetrical, not the surgical degree.

Delivery usually takes place with the patient lying on her left side, if a primipara; on her back, if a multipara.

The placenta is expressed by the Credé method at the end of fifteen minutes; one drachm of fluid extract of ergot then administered, a vaginal douche of three pints of bichloride solution (1:5,000) of a temperature of 116° F. given, and the uterus held for one hour after delivery, when, if well contracted, the binder is applied, the patient placed upon another table which is provided with wheels, and removed to the ward where she is to remain during the puerperium. The

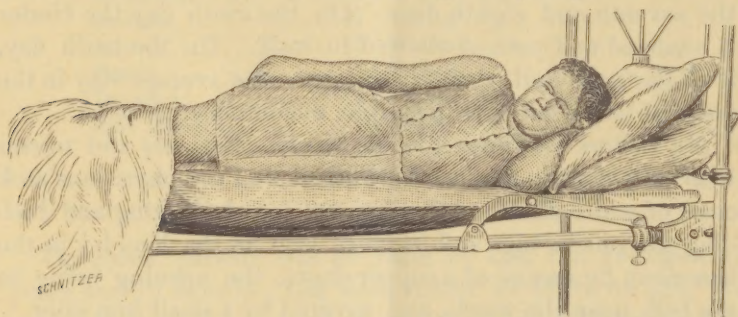


FIG. 2.—Patient with abdominal and breast binder applied.

perineum, if torn to any extent, is sutured at once with silk-worm gut.

The intra-uterine douche is only given in cases of instrumental delivery or where the hand has been introduced.

The entrance to the genital canal is closed by an antiseptic pad, twenty-eight inches long and eight inches wide, made of gauze and filled with absorbent cotton. On the first day these pads are changed every four hours; on subsequent days once in eight hours, the pads being somewhat smaller as the lochial discharge diminishes in quantity.

If after-pains occur, a draught is given containing one-sixth of a grain of the acetate of morphia, one minim of fluid extract of digitalis, and one drachm of spiritus Mindereŕi, and repeated if necessary.

The diet during the first day consists exclusively of milk;

on the second and third days oatmeal or hominy with bread and butter are given for breakfast, soup with some vegetable food and a dessert for dinner, bread and butter with stewed fruit for supper. Milk is given between meals. After the third day the patient is allowed full diet, similar to that given to those awaiting confinement.

The process of involution is promoted by the administration three times a day of

Extracti Ergotæ fluidi.....	℥ xv.
Extracti Digitalis fluidi.....	℥ ii.
Quiniae Sulphatis.....	gr. ii.

On the sixth day usually the patient is wrapped in blankets and allowed to sit up for two hours; for five or six hours on the seventh and eighth days. On the ninth day the binder is removed and patient allowed to walk. On the tenth day, if all has gone well, she is discharged—the average stay in the hospital being ten days in simple, uncomplicated cases.

No visitors are allowed in the wards. Patients and nurses wear only clothes that can be washed, and the physicians sack coats of white duck. All soiled articles of clothing and bedding are put in bags and at once sent to the laundry in the basement by means of a copper chute, the opening being in the hall, near the wards, and covered by a small iron door.

Physicians and nurses exercise the most scrupulous care in regard to personal cleanliness and disinfection. Before making a vaginal examination the hands are scrubbed and a nail brush used; they are then immersed in alcohol and afterward in a solution of bichloride (1:2,000). Alboline, kept underneath a bichloride solution, is used as an emollient. No sponges are allowed in the hospital, being replaced by absorbent cotton.

The Newly-born Child.—The cord is tied a few minutes after birth, and immediately afterward one drop of a two-per-cent solution of silver nitrate is put in each eye. The rectal temperature is then taken, the child weighed, wrapped in a blanket, placed in a crib, and surrounded by hot-water bags. Each child is weighed every morning and has a full bath (temperature 98° F.). The cord is dressed with iodoform and bismuth subnitrate, equal parts. The mouth is washed with saturated

solution of boracic acid. The child is put to the breast of the mother twelve hours after birth for the first time. After lactation is established, the child is allowed to nurse once in two hours from 6 A.M. to 10 P.M., and again at 2 A.M., ten nursings daily.

The following statistics are of interest:

TABLE I.

NATIONALITY.

Out of the 1,000 women confined, there were born in the

United States.....	377	Canada....	11
Ireland.....	320	Russia.....	19
Germany.....	104	Switzerland....	8
England.....	52	Hungary.....	5
Sweden.....	32	Wales.....	4
Scotland.....	17	Saxony.....	3
Austria.....	17	Norway.....	3
France.....	17	Poland ..	4
Denmark.....	4	Roumania ..	1
East Indies.....	1	Spain....	1

TABLE II.

AGES.

The oldest patient was 46 years of age, the youngest 12 years and 10 months; 154 were under 20 years of age, 659 were between the ages of 20 and 30 years, 171 between 30 and 40, and 16 between 40 and 50.

TABLE III.

SHOWING THE PROPORTIONATE NUMBER OF CASES OCCURRING IN THE SEVERAL PREGNANCIES.

Pregnancy,	1st.	2d.	3d.	4th.	5th.	6th.	7th.	8th.	9th.	10th.	11th.	12th.	17th.	Total
No. of cases	547	232	91	52	25	11	14	9	10	5	1	2	1	1000

TABLE IV.

PRESENTATIONS UNDER WHICH CHILDREN WERE BORN.

Vertex.....	936, or 93.6 per cent.
Breech.....	49, " 4.9 "
Transverse..	10, " 1. "
Shoulder...	5, " 0.5 "
Face.....	3, " 0.3 "
Brow.....	2, " 0.2 "
Foot.....	2, " 0.2 "
Doubtful.....	6, " 0.6 "

TABLE V.

SHOWING RELATIVE FREQUENCY OF THE FOUR POSITIONS IN VERTEX PRESENTATIONS.

Position.	No. of cases.
L. O. A.....	610
R. O. A.....	227
R. O. P.....	77
L. O. P.....	22

TABLE VI.

SHOWING THE NUMBER OF CASES REQUIRING OPERATIVE INTERFERENCE, AND OPERATIONS PERFORMED.

Induction of labor.....	12 cases.
Forceps.....	83 "
Version.....	14 "
Craniotomy.....	3 "
Total.....	112 "

TWIN CASES.

Of twin cases there were 13, about 1 in 77 of the whole number of women delivered, or 1.3 per cent.

No. of Cases.	Both Males.	Both Females.	One of each.
13	2	4	7

Presentations.

Vertex in both.....	6
" and breech.....	4
" " transverse.....	2
Breech or ".....	1
	—
	13

In 7 cases there were two amniotic cavities and a single placenta; in 6 cases there were two amniotic cavities and a double placenta. In no case was there a single amniotic cavity.

FACE PRESENTATIONS.

No. of cases.	Living.	Dead.
3	3	0

Two of the patients were delivered by natural efforts, one by forceps. In two cases the position was L. M. A.; in one L. M. P., rotation, however, taking place, so that it terminated as R. M. A. Two children were born alive; the one delivered by forceps was still-born.

VERSION.

This operation was performed fourteen times, or one in nearly seventy-one, or 1.4 per cent. The version was podalic in thirteen instances, cephalic in one instance. The operation was made necessary by malpresentation in nine cases, in four by placenta previa. Of the malpresentations, eight were shoulder cases, one a compound of head and foot. Of the mothers, three died, or one in five nearly. Two out of the three who died were in labor with placenta previa; the third entered the hospital moribund, with the child's arm prolapsed, and a ruptured uterus, and died twenty minutes after admission. Of the fourteen cases, six children were born alive, ten were still-born. Of the latter, four were premature, two macerated. In all the cases where the mother died the children were still-born. Of the fourteen cases, six were brought by ambulance, in labor. The versions were all performed by the combined external and internal methods, chloroform being used. Details of cases are briefly given below:

CASE I. *Transverse Presentation; Podalic Version.*—Æt. 29; IIIpara. Patient came into the hospital in labor, the os being dilated to size of a dollar. Membranes ruptured spontaneously, followed by prolapse of right arm. Chloroform was given, the arm returned into the uterus, and left foot brought down. A still-born male child was easily delivered, weighing three pounds, premature and macerated. Mother made a good recovery.

CASE II. *Twins; Shoulder Presentation; Podalic Version.*—Æt. 29; VIIpara. Patient brought by ambulance, after having given birth to a female child at her home. On examination a second child was found in an abdomino-anterior position, the right shoulder presenting, the amniotic sac having ruptured. Chloroform was given, hand introduced, shoulder pushed up, and left foot seized and brought down. The child, a male, was easily extracted. Both children were small and poorly nourished, labor being premature. Mother did well.

CASE III. *Contracted Pelvis; Placenta Previa.*—This case is described under Placenta Previa (vide Case I.).

CASE IV. *Placenta Previa*.—(Vide Case II., *Placenta Previa*.)

CASE V. *Left Shoulder Presentation*.—Æt. 30; third confinement. Patient brought in by ambulance, in labor, child's elbow being in the vagina, os fully dilated. Hand drawn down to determine position; found to be the left hand, with head on right side. A hot douche of bichloride solution was given (1:5,000), chloroform administered, hand returned into uterus, head pushed up by external manipulation, right leg seized and brought down, and head extracted by the Smellie-Veit method. The left arm became extended, and in sweeping it over the face the humerus was fractured. The child was living. Weight, seven pounds four ounces. Mother made a good recovery.

CASE VI. *Twins; Compound Presentation of Second Child*.—Æt. 30; third confinement. First child presented by the breech and was born without difficulty; weight, five pounds four ounces; living. Membranes of second child were ruptured, and head and foot presented. Bipolar version was performed, the head being pushed up and the foot brought down. A living male child, weighing nine pounds four ounces, was delivered, the after-coming head being extracted by the Smellie-Veit method. Mother made a good recovery.

CASE VII. *Right Shoulder Presentation*.—Æt. 28; sixth confinement. Membranes ruptured spontaneously. Child was in a dorso-anterior position, head being on left side of pelvis, right elbow at os uteri. Patient was put under chloroform, hand introduced into the vagina with three fingers passed through the cervix, and a binmanual version easily performed, the left leg being brought down. The breech was expelled by natural efforts. Arms became extended, but were drawn down without difficulty, and the after-coming head delivered by forceps. The child was living (a female); weight, six pounds six ounces. A hot intra-uterine and vaginal douche was given of bichloride (1:10,000). Mother recovered easily.

CASE VIII. *Rupture of Uterus*.—(Vide Case I. under that head.)

CASE IX. *Twins; Right Shoulder Presentation of Second*

Child.—Et. 24; primipara. First child presented in the first cranial position, and was born after labor of eighteen hours' duration. It was living, and weighed five pounds two ounces. Uterine action then ceased. By palpation the presence of another child in utero was discovered, but no fetal movements could be detected and no heart sounds heard. The membranes were ruptured, and the right shoulder was found presenting at the dilated os uteri. A bimanual version was performed and the left foot brought down. Head was extracted by the Smellie-Veit method. The child was still-born (a female), weighing four pounds four ounces. Mother did well.

CASE X. *Shoulder Presentation; Cephalic Version*.—Et. 27; fourth confinement. Patient entered hospital in labor. Child was in a transverse position, dorso-anterior, head to the left side, and right shoulder presenting. The membranes being unruptured, a cephalic version was performed under chloroform by combined external and internal manipulation, and the presentation converted into a vertex L. O. A., pads and a binder being employed to keep the child in this position, and the labor proceeded regularly, though slowly, until the birth of a living female child weighing four pounds fifteen ounces. The mother did well.

CASE XI. *Placenta Previa Centralis; Version*.—(Vide Case III., Placenta Previa.)

CASE XII. *Placenta Previa*.—(Vide Case IV. under that head.)

CASE XIII. *Shoulder Presentation; Dead Fetus*.—Et. 30; fifth confinement. Patient came into the hospital in labor, the membranes having ruptured, and the child presenting by the shoulder, the elbow being at the os uteri. The uterine tumor was flaccid, and the child's form could not be made out by palpation. No fetal movements or heart sounds could be detected. Patient had not "felt life" for three weeks. An attempt at version by the Hicks method was made, but, owing to the contraction of the cervix and to the death of the child, leading to the loss of resiliency, it was unsuccessful. Hot vaginal douches were given to relax the cervix, and the patient allowed to rest for three hours. A second attempt was then made, and a macerated child, weighing

two pounds twelve ounces, extracted. A hot intra-uterine and vaginal douche of bichloride solution (1:10,000) was then given. The mother did well.

CASE XIV. *Shoulder Presentation; Dorso-Posterior.*—Æt. 39; fourth confinement. Patient brought in by ambulance, in labor, having been attended at home by a midwife. Pains strong and recurring every five minutes. Membranes had ruptured. As the os was imperfectly dilated, fifteen grains of chloral hydrate were given. In three hours os was well dilated. Position of child was dorso-posterior, with right shoulder presenting. No fetal heart sounds heard. Patient was now put under chloroform to the surgical degree, the left hand introduced into the uterus, the left foot seized and drawn down, and body delivered without difficulty, the head being extracted by the Smellie-Veit method. The child, a male, weighing eight pounds one ounce, had been dead for some time. Uterus and vagina washed out with hot bichloride solution. Patient convalesced without interruption and left hospital on tenth day.

FORCEPS CASES.

Out of one thousand births, labor was terminated by forceps in eighty-three, or one in about twelve, or 8.3 per cent. Their frequent use has saved much maternal suffering, not to say many lives, and greatly reduced the infant mortality. Out of the eighty-three cases, none of the mothers died; of the eighty-four children, seventy-five were living, nine still-born, including premature twins.

Males living.....	50	}	75
Females living.....	25		
Males dead.....	5	}	7
Females dead.....	2		
Premature twins.....	2		2
	84		84

In nearly all the cases the long curved forceps (Dr. McLane's pattern) were used, both in high and low operations. The blades of this instrument are solid instead of being fenestrated, which renders them more easy of introduction and less liable to mark the child. Experience proves that they do not slip more than the fenestrated variety. In two cases the axis-traction forceps of Tarnier were used.

A tabular statement of all the forceps cases is appended:

TABULAR STATEMENT OF FORCEPS CASES.

No. of Case.	Age.	Para.	Cause of interference.	Duration 2d stage in hrs & minutes	Position in pelvis reached by head.	Children.				Mothers.	
						Living.	Dead.	Recov'd.	Died.	Recov'd.	Died.
1	21	1	Inertia in second stage.	2 50	Low in cavity	1	..	1	..	1	..
2	35	1	Inertia in second stage.	3 35	Low in cavity	1	..	1	..	1	..
3	20	1	Inertia in second stage.	3 05	At brim.....	1	..	1	..	1	..
4	22	1	Inertia in second stage	11 30	Low in cavity	1	..	1	..	1	..
5	38	1	Powerless labor	11 25	In cavity.....	1	..	1	..	1	..
6	27	1	Powerless labor	7 49	In cavity.....	1	..	1	..	1	..
7	28	2	Ext's'n of head at outlet.	.. 45	Low in cavity	1	..	1	..	1	..
8	26	2	Inertia in second stage.	7 14	Low in cavity	1	..	1	..	1	..
9	25	1	Inertia in second stage.	4 38	Low in cavity	1	..	1	..	1	..
10	25	1	Contracted pelvis.....	5 35	Low in cavity	1	..	1	..	1	..
11	18	1	Inertia in second stage.	4 30	Low in cavity	1	..	1	..	1	..
12	24	1	Inertia in second stage.	4 15	Low in cavity	1	..	1	..	1	..
13	29	2	Inertia in second stage.	4 50	Low in cavity	1	..	1	..	1	..
14	29	2	Placenta previa.....		At brim	1	..	1	..	1	..
15	26	1	Inertia in second stage.	2 45	Low in cavity	1	..	1	..	1	..
16	24	1	Inertia in second stage.	4 40	Low in cavity	1	..	1	..	1	..
17	28	1	Inertia in second stage.	4 ..	Low in cavity	1	..	1	..	1	..
18	25	1	Inertia in second stage.	5 19	Low in cavity	1	..	1	..	1	..
19	25	1	Powerless labor	3 35	At brim.....	1	..	1	..	1	..
20	29	1	Eclampsia	.. 55	At brim	1	..	1	..	1	..
21	26	1	Inertia in second stage.	4 32	Low in cavity	1	..	1	..	1	..
22	19	1	Inertia in second stage	2 ..	Low in cavity	1	..	1	..	1	..
23	29	1	Inertia in second stage.	4 ..	Low in cavity	1	..	1	..	1	..
24	28	3	Contracted pelvis.....	4 35	Low in cavity	1	..	1	..	1	..
25	20	1	Inertia in second stage.	1 15	Low in cavity	1	..	1	..	1	..
26	17	1	Protracted labor	.. 50	Low in cavity	1	..	1	..	1	..
27	35	5	Inertia in second stage.	1 30	Low in cavity	1	..	1	..	1	..
28	24	1	Powerless labor	1 25	At brim.....	1	..	1	..	1	..
29	22	1	Inertia in second stage.	2 45	In cavity	1	..	1	..	1	..
30	26	1	Threatened eclampsia...	45	At brim.....	1	..	1	..	1	..
31	24	1	Inertia in second stage.	2 ..	Low in cavity	1	..	1	..	1	..
32	25	1	Inertia in second stage.	12	Low in cavity	1	..	1	..	1	..
33	24	1	Inertia in second stage.	2 35	Low in cavity	1	..	1	..	1	..
34	29	1	Inertia in second stage.	3 45	Low in cavity	1	..	1	..	1	..
35	33	1	Pelvis encroached upon by tumor	5 20	Low in cavity	..	1	1	..	1	..
36	24	1	Inertia in second stage.	2 05	Low in cavity	1	..	1	..	1	..
37	20	2	Protracted labor	.. 35	Low in cavity	1	..	1	..	1	..
38	28	1	Threatened eclampsia...	20	At brim.....	1	..	1	..	1	..
39	28	1	Protracted labor	2 45	In cavity.....	..	1	1	..	1	..
40	20	1	Protracted labor		At brim.....	..	1	1	..	1	..
41	19	1	Inertia in second stage	3 50	In cavity....	1	..	1	..	1	..
42	20	1	Inertia in second stage.	4 25	In cavity.....	1	..	1	..	1	..
43	27	1	Inertia in second stage.	8 20	Low in cavity	..	..	1	..	1	..
44	37	3	Inertia in second stage.	2 25	In cavity.....	1	..	1	..	1	..
45	20	1	Protracted labor		At brim..	..	1	1	..	1	..
46	31	5	Prolapse of funis	.. 15	In cavity.....	..	1	1	..	1	..
47	21	1	Inertia in second stage.	4 15	In cavity....	1	..	1	..	1	..
48	23	1	Inertia in second stage.	5 45	In cavity.....	1	..	1	..	1	..
49	23	1	Protracted labor	.. 30	At brim.....	..	1	1	..	1	..
50	33	1	Powerless labor	2 10	In cavity....	..	1	1	..	1	..
51	25	1	Powerless labor	2 20	In cavity....	..	1	1	..	1	..
52	21	1	Eclampsia	.. 10	At brim....	1	..	1	..	1	..

TABULAR STATEMENT OF FORCEPS CASES.

No. of Case.	Age.	Para.	Cause of interference.	Duration 2d stage in hrs & minutes.	Position in pelvis reached by head.	Children.		Mothers.	
						Liv. ing.	Dead.	Recov'd.	Died.
						M. F.	M. F.		
53	19	1	Powerless labor.....	4 40	Low in cavity.	1 ..	..	1	..
54	32	1	Powerless labor.....	1 ..	Low in cavity.	1 ..	..	1	..
55	18	1	Inertia in second stage..	1 20	Low in cavity	1 ..	..	1	..
56	20	1	Inertia in second stage..	4 32	In cavity....	1 ..	..	1	..
57	21	1	Inertia in second stage..	2 40	In cavity....	1 ..	..	1	..
58	35	4	Inertia in second stage..	5 21	In cavity....	1 ..	..	1	..
59	22	1	Contracted pelvis.....	.. 20	At brim.....	..	1 ..	1	..
60	25	1	Powerless labor.....	8 10	In cavity....	1 ..	1 1	1	..
61	42	3	Eclampsia	.. 55	In cavity....	1 ..	..	1	..
62	32	1	Inertia in second stage..	3 18	In cavity....	..	1 ..	1	..
63	20	1	Inertia in second stage..	1 40	In cavity....	1 ..	..	1	..
64	22	2	Inertia in second stage..	.. 40	In cavity....	1 ..	..	1	..
65	16	1	Inertia in second stage..	3 ..	Low in cavity.	1 ..	..	1	..
66	26	1	Inertia in second stage..	4 ..	Low in cavity.	1 ..	..	1	..
67	25	1	Inertia in second stage..	4 15	Low in cavity..	..	1 ..	1	..
68	23	1	Powerless labor.....	2 34	Low in cavity..	..	1 ..	1	..
69	28	1	Powerless labor	2 40	In cavity....	1 ..	..	1	..
70	22	1	Protracted labor.....	2 17	At brim.....	1 ..	..	1	..
71	23	1	Protracted labor.....	.. 40	Low in cavity.	..	1 ..	1	..
72	24	1	Inertia in second stage..	2 19	Low in cavity.	1 ..	..	1	..
73	27	1	Inertia in second stage..	.. 18	Low in cavity.	1 ..	..	1	..
74	30	7	Contracted pelvis.....	.. 45	At brim....	1 ..	..	1	..
75	37	2	Powerless labor.....	4 20	At brim.....	1 ..	..	1	..
76	24	1	Protracted labor.....	.. 10	At brim.....	..	1 ..	1	..
77	35	2	Powerless labor.....	5 15	In cavity....	1 ..	..	1	..
78	26	1	Protracted labor.....	.. 25	In cavity....	1 ..	..	1	..
79	23	2	Inertia in second stage..	2 25	Low in cavity..	..	1 ..	1	..
80	25	1	Inertia in second stage..	3 02	Low in cavity.	1 ..	..	1	..
81	26	1	After coming head....	.. 30	Low in cavity.	1 ..	..	1	..
82	32	2	Inertia in second stage..	1 50	Low in cavity..	..	1 ..	1	..
83	31	2	Inertia in second stage..	1 16	Low in cavity	..	1 ..	1	..

CRANIOTOMY.

The number of cases in which the fetal head was perforated was three, or one in three hundred and thirty-three, or 0.3 per cent. The causes which led to the operation were in two cases impacted brow presentation, in one contracted pelvis. In all the cases the children were dead prior to the operation. None of the mothers died.

CASE I. *Brow Presentation; Impaction; Cephalotripsy.*—Æt. 37; ninth confinement. Patient's second labor was difficult, owing to hydrocephalic child; the other seven were easy and normal. Brought in by ambulance, having been in labor five days under the care of a midwife. Labor began with rupture of membranes. On the second day she was

¹ Twin presentation.

able to get up and attend to her household duties; during next two nights pains were very severe, since which time they have gradually diminished. No fetal movements have been felt for four days. Patient's condition on admission exceedingly bad. Uterus retracted, and tightly contracted about body of child; cervix hyperemic and edematous. Highly offensive discharge from uterus. Child presented by the brow, which was impacted; large fontanelle collapsed; child dead. Soon after admission patient had severe chill; rectal temperature 107° ; pulse very rapid and weak. Chloroform was given, the head perforated and afterward crushed with Scanzoni's cephalotribe and extracted. The child was a female of large size. The uterus and vagina were thoroughly washed out with a hot bichloride solution, and a full dose of opium administered. On the following morning the temperature was 95° , and the mother made a rapid recovery without the development of any symptoms. The rapid fall of temperature from 107° to 95° in twelve hours, with no subsequent rise, and the entire disappearance of septic symptoms after the intra-uterine irrigation, are worthy of note.

CASE II. *Brow Presentation; Contracted Pelvis.*—Et. 23; primipara. Patient brought in by ambulance, having been in labor thirty-two hours. Her physician had performed a version for the correction of a transverse presentation, with the result of substituting for it a brow, which was found tightly impacted in the pelvis. Membranes ruptured spontaneously the day before labor set in. Uterus was retracted, and closely contracted about the body of the child. The following measurements were made of her pelvis: External conjugate, six and one-quarter inches; distance between spines nine and three-eighth inches, between crests ten and one-half inches; internal conjugate, two and three-quarter inches. Patient was anesthetized and head perforated through the right orbit. Lusk's cephalotribe was then applied and considerable traction made, aided by external pressure over uterus. When the head had been brought low in pelvis, cephalotribe was removed and another perforation was made through the left frontal bone. The cranioclast was then used for the final delivery of the head; shoulders were

extracted with blunt hook. Slight hemorrhage followed. The vagina and uterus were thoroughly washed out with hot bichloride solution (1 : 10,000). The mother made a good recovery.

CASE III. *Contracted Pelvis*.—Et. 22; primipara. Pelvis normal in shape, but the internal conjugate diameter was fully one inch shortened. Child presented by the vertex; position L. O. A. Pains occurred at intervals of fifteen minutes, their strength being variable. After eight hours of labor the funis came down into the pouch of membranes in front of head. Patient placed in knee-chest position and cord pushed up into the uterus. Pains continued strong for several hours, then grew weaker. There was no descent of the head. Symptoms of exhaustion developed. No fetal heart sounds could be heard. Patient anesthetized and head perforated. Scanzoni's cephalotribe was then applied and the head delivered. Considerable hemorrhage followed. Uterus was flabby and filled with clots. Hand introduced, clots removed, and intra uterine douche of hot bichloride solution (1 : 10,000) given, which at once stopped the bleeding. Mother made a good recovery.

INDUCTION OF PREMATURE LABOR.

Labor was induced twelve times. The indications for the operation were as follows: Albuminuria in four cases; eclampsia in one case; contracted pelvis in three cases; chorea in one case; placenta previa in one case; death of fetus in one case; accidental hemorrhage in one case. All the mothers recovered. Seven children were born alive; five were still-born, not one of these being viable. Details of these interesting cases are given below:

CASE I. *Chorea*.—Et. 17, not married; six months advanced in her first pregnancy. Patient enjoyed good health until she was eight years old, when she had an attack of acute rheumatism lasting a month. Three years after she became fretful and at times excited, with twitching in her arms and legs, and since that time she has been choreic. Menstruation began two years ago, and occurred regularly until she became pregnant. The chorea was greatly intensified by her pregnancy; twitchings became almost constant. She slept

poorly and grew very much emaciated, and finally was compelled to remain in bed. On admission patient was anemic and poorly nourished, and suffering from continual jactitation of all the muscles of the body. Pulse rapid, co-ordination impaired, deglutition difficult. Heart normal in size, first sound prolonged; no murmur detected. Breasts large and flabby. Fetal movements distinct, and heart beating 150 per minute. After consultation with Prof. T. Gaillard Thomas it was decided to terminate her pregnancy. The vagina was washed out with a solution of bichloride (1:5,000), and a bougie passed into the uterus seven inches. Labor came on within twenty-four hours, and patient gave birth to a small fetus, the placenta and membranes coming away intact. Hot vaginal douche was repeated after delivery, and her convalescence was uninterrupted. The choreic movements daily grew less, and had nearly ceased by the tenth day when she left the hospital.

CASE II. *Albuminuria*.—Æt. 19; primipara; eight and one-half months pregnant. Patient noticed two months ago that her legs began to swell, and soon after she suffered from headache, vertigo, and visual disturbances. On admission there was considerable edema of the feet and legs, and the prolabia were enormously distended. Urine scanty, smoky, containing sixty per cent of albumin. A dose of calomel was given and the bowels kept freely open each day afterward by sal Rochelle, and patient placed on a milk diet. The albumin steadily increased, until in five days the urine contained seventy-five per cent.

It being deemed best to induce labor, the patient was chloroformed, a bougie introduced into the uterus and kept in place by a vaginal tampon. Labor pains began in half an hour. Chloroform was given continually until the head was born. Duration of labor, twelve hours. After delivery a hot vaginal douche of bichloride (1:10,000) was given and a full dose of morphine administered hypodermatically. The child was a male, weighing six pounds nine ounces; asphyxiated when born, owing to the tightness of the cord around the neck, but resuscitated by friction with alcohol, a hot bath, and insufflation of lungs by catheter. On the following day eight ounces of urine were passed in the morning, containing twenty-five per

cent of albumin, and in the evening forty-two ounces, containing ten per cent. During next twenty-four hours seventy ounces were passed, containing no albumin. Patient left the hospital on the tenth day, well.

CASE III. *Albuminuria*.—Et. 25; primipara; pregnant eight and one-half months. Urine contained forty per cent albumin. Microscopical examination revealed nothing of importance. No nervous symptoms. Put on milk diet for three days, but quantity of albumin steadily increased. Labor was induced by introducing a bougie into the uterus. Pains began in ten hours afterwards; chloroform was given; labor was without complication, and terminated in fourteen hours and twenty-five minutes from the introduction of the bougie. The child was born alive, a well-nourished female, weighing six pounds ten ounces. Milk diet was continued, and albumin steadily decreased, on the eleventh day being only five per cent. She left the hospital in a few days afterward.

CASE IV. *Eclampsia; Twins; Prolapse of Funis*.—Et. 41; third pregnancy; advanced seven months. Patient was perfectly well till four weeks ago, when she began vomiting everything she took into her stomach. Had frequent micturition, scanty and burning. Four days ago had a convulsion, which, from the description given, was evidently eclamptic. She had several during the day, and the physician who was called in made hot applications to the head, gave her some chloroform and some "powders." During the next two days she had no convulsions, but suffered from severe headache. On following day she had a return of the eclamptic seizures, and up to the time of admission she had had twenty-six convulsions, one occurring while being brought to the hospital in the ambulance. On admission she was in a state of complete stupor; face flushed, pupils strongly contracted, respiration labored, pulse hard, temperature 98°; face, feet, and vulva edematous. She was taken at once to the delivery room, chloroformed, and a vaginal examination made. Cervix one inch long, soft, but not at all dilated; vagina hot and dry; bladder contained two drachms of smoky urine, which was removed by catheter and found to contain thirty per cent albumin.

The os was dilated moderately by finger, and membranes

ruptured, patient being still kept under chloroform. Considerable liquor amnii escaped ; rectal enema then given, followed by a small movement of the bowels. A Barnes' dilator was then introduced. Labor pains began in three hours, bag expelled, and funis was found prolapsed. It was replaced, but came down again with the next pain, and, as it was pulsating well, it was left in vagina. As soon as cervix was fully dilated, forceps were applied and a child delivered weighing one pound seven ounces. The circulation was good, but respiration could not be established. On examination another child was found presenting by the breech. Membranes were ruptured and a foot brought down, and child extracted easily, weighing one pound nine ounces. Heart action fairly good, but no attempt at respiration. Placenta expressed by Credé method ; no hemorrhage. Hot intra-uterine and vaginal douche (1 : 10,000) given. The chloroform was supplemented by acetate of morphine, with spiritus Mindereri and digitalis, every four hours ; milk diet. Patient's tongue was very much swollen and bitten badly. On following morning stupor continued ; eight ounces urine drawn by catheter ; fifty percent albumin ; high colored ; specific gravity 1.016. Patient cannot see. Stupor alternating with delirium during the day. Next day much better ; forty-eight ounces urine passed in twenty-four hours ; temperature 100° ; able to see and speak. Seventy-six ounces urine were passed on the following day, with only a trace of albumin ; general condition good. On thirteenth day she left the hospital. This case illustrates the immediate effect of rupturing the membranes in putting a stop to the convulsions.

CASE V. *Ante-partum Hemorrhage*.—Æt. 36 ; Xpara ; washerwoman, eight and a half months pregnant. Previous labors normal. Patient stated that while carrying one of her children she slipped and fell to the floor ; she remained unconscious for some time, and on being put to bed it was discovered that she was bleeding ; also had severe pain in the abdomen, but absence of all true labor pains. While being brought to the hospital by ambulance hemorrhage was still going on. Face and mucous membranes very anemic ; pulse 138 and feeble ; os admitted finger ; whiskey given every fifteen minutes, and pulse came down to 120. Patient could not lie

on her back, as it caused severe pain in the abdomen. Membranes were ruptured, binder applied, and liquor amnii evacuated. Bleeding now entirely ceased. Labor came on in six hours, and a still-born child was delivered at the end of ten hours. Several large clots came away after birth of child. Placenta was expressed. No chloroform was given; pulse after delivery 132; no further hemorrhage. Patient left the hospital on sixteenth day. This plan of treatment in cases of hemorrhage occurring late in pregnancy, with a normally implanted placenta, has uniformly stopped the bleeding. It allows the uterine walls to contract, and provokes labor.

CASE VI. *Death of Fetus; Albuminuria*.—Æt. 43; sixth pregnancy, advanced eight and a half months. Patient fell down-stairs ten days ago, since which time she has not felt any life in her child. On examination upon admission, no fetal movements could be distinguished, no heart sounds. Urine contained forty per cent albumin.

Labor was induced by the bougie passed up on the right side of the uterus. Pains began in four hours, membranes ruptured spontaneously high up, and in eleven hours she gave birth to a still-born child which had evidently died at the time of her fall. The albuminuria rapidly disappeared, and in forty-eight hours the urine contained only about one per cent. Patient discharged on tenth day.

CASE VII. *Contracted Pelvis*.—Æt. 26; native of Austria; primipara; pregnancy advanced eight months. When three years old patient had a fall, and has since had scoliosis. She is of short stature. Pelvic measurements as follows: Distance between anterior superior spines, ten and a half inches; distance between crests, eleven inches; external conjugate, six and three-quarter inches. Promontory of sacrum tilted to one side and projecting inward toward symphysis.

Labor was induced by bougie. Pains began in six hours. At the end of twenty-one hours, os being dilated, bougie was removed, a hot douche given, and the membranes were ruptured. Pains now increased in frequency and force, but no rotation of the head took place. Its position was R. O. A. Chloroform was now given, forceps applied, and head delivered in the left oblique diameter. Child a male, weighing eight pounds eleven ounces. Duration of labor, twenty-six

hours fifty-seven minutes. Mother and child did well and left the hospital in sixteen days.

CASE VIII.—Same patient; second pregnancy, advanced a little over eight months. Labor was induced by same method. Pains began one hour after the introduction of the bougie, and in five hours, the os being well dilated, bougie was removed and the membranes were ruptured. Pains were strong and frequent, but the head made little advance, the occiput being directed posteriorly, the head in position R. O. P. Chloroform was given, forceps applied, and the head delivered with the occiput posterior. The child a female, weighing seven pounds. Length of labor, five and a half hours. Patient left the hospital on tenth day with her child.

CASE IX. *Albuminuria*.—Æt. 20; first pregnancy, advanced seven and a half months. Patient had been under treatment for albuminuria before coming to hospital. On admission she was suffering from no well-marked nervous symptoms, but her feet and legs were swollen, and the edema of the vulva was so great that she was unable to walk. Urine scanty, forty-three per cent albumin, no casts. It was necessary to puncture the labia in order to make a vaginal examination. The cervix was soft and dilatable. Labor was induced by dilating the cervix and rupturing the membranes. Pains began soon afterward, and labor progressed regularly until terminated in five and a half hours by the birth of a living male child, well nourished, weighing four pounds ten ounces. Hot douche of bichloride (1:5,000) given. On following day edema of vulva had nearly disappeared, and albumin in urine steadily decreased. She left the hospital on tenth day.

CASE X. *Bright's Disease*.—Æt. 25; first pregnancy, advanced seven months. Patient had suffered for three months from pain in back. Three weeks ago noticed that her urine was very scanty and dark colored. The pain in the back became more severe and her legs began to swell. Was under treatment for a week before entering the hospital. On admission, headache, visual disturbances, vomiting; urine, specific gravity 1.035, ninety per cent albumin, scanty, and loaded with granular, hyaline, epithelial, and fatty casts. Put on milk diet. Infusion of digitalis and citrate of potassa.

At the end of five days, there being no decrease in the albumin, labor was induced. Chloroform was given and bougie introduced. The instrument punctured the membranes high up and liquor amnii slowly drained away. Pains did not begin until evening of next day and were very feeble. On following day they became stronger; cervix now dilated rapidly, the expulsive stage lasting only eight minutes. Child still-born, weighing two pounds ten ounces. Patient was greatly benefited by the emptying of the uterus; left the hospital in ten days, the urine still containing albumin, but only twenty-five per cent.

CASE XI. *Contracted Pelvis*.—Æt. 28; IIIpara; eight months pregnant. Patient delivered "by instruments" of her first child in England five years ago; child was "dead." Two years ago was confined in Bellevue Hospital and delivered by craniotomy by Prof. Lusk. A vesico-vaginal fistula followed, for which she has been operated upon several times. Patient is of small stature, fifty-eight inches in height. Pelvis generally contracted, with following measurements: Distance between spines, nine and one-half inches; distance between crests, ten and one-half inches; external conjugate, six and three-quarter inches. Vaginal canal greatly obstructed by cicatricial tissue; no vaginal cervix, the os being apparently an aperture in the vaginal roof. Labor induced by bougie introduced on right side, and, as it showed a tendency to slip, it was kept in place by a tampon of cotton soaked in solution of bichloride. Slight pains were felt at expiration of six hours. Tampon removed and hot vaginal douche given. Cervix was somewhat dilated. Tampon replaced. On following day bougie and tampon were removed and membranes ruptured. Pains were strong and followed one another in quick succession. Chloroform given. Head descended in transverse diameter. Caput succedaneum very large. Descent of head now ceased, though pains were severe. Temperature 102.6°; pulse 144. Forceps were applied and a living male child delivered weighing six pounds. The moulding of the head was very marked. Duration of labor: First stage, five hours; second, four hours thirty-five minutes; third, fifteen minutes. Mother and child did well and left the hospital on the seventeenth day. The following year patient

returned pregnant for the fourth time, with placenta previa (under which heading her fourth labor is described).

CASE XII. *Placenta Previa; Breech Presentation.*—Æt. 24; primipara; eight months pregnant. Patient brought in by ambulance with this history: Two weeks ago had a severe hemorrhage, followed by two slight ones after interval of several days, and then by another copious one the night before admission. On examination, the cervix admitting the tip of finger, the placenta was found centrally implanted. Os was dilated, placenta separated on one side, both feet grasped and brought down, and patient rapidly delivered of a living child. Placenta quickly followed, with a great rush of fresh blood and clots. There was no hemorrhage during delivery of child. An intra-uterine and vaginal douche of bichloride solution were given, and ergot hypodermatically. Patient made a slow convalescence and left the hospital on the fifteenth day.

PLACENTA PREVIA.

Nine cases occurred, or one in one hundred and eleven, or 0.9 per cent. Of these, five were complete, four partial. Two of the mothers died, or one in 4.5, or about twenty-two per cent. Details of these cases and two others are given below. In one this fatal result was due to delay in obtaining medical assistance, the patient having nearly bled to death before coming to the hospital. In both transfusion was performed.

Four of the children were still-born, five were delivered alive; of the still-births, two were premature, the child not being viable. Version was performed in four of the cases; one child was delivered by forceps.

CASE I. *Contracted Pelvis.*—Æt. 30; fourth confinement. (History of third confinement, vide Case XI., Induction of Premature Labor.) Patient was confined in this hospital in her third labor, prematurely, two years ago. Now again pregnant six months. On examination, pelvis found justo-minor; previous measurements confirmed. Cervix very high, two bands of cicatricial tissue in the upper part of vagina narrowing the canal very much. General condition good. After being in the hospital a few days, patient had a severe hemorrhage, without warning or pain,

twenty ounces of blood being lost. Vaginal tampon was inserted. In two hours tampon removed, when another gush of blood occurred. The cervix was undilated and very high; but placenta could be felt, its attachment being nearly central. A second tampon was introduced; in an hour pains began, tampon became saturated with blood, and some blood escaped from vagina. Tampon again removed, and os found dilated to size of silver dollar, placenta being distinctly felt. Pulse very rapid, 160, and weak. Stimulants were given, the membranes ruptured, and a version performed, both feet being brought down; the funis came down with feet. Notwithstanding pressure made over fundus to preserve flexion of the head, arms became extended, but were brought down with little difficulty, and child extracted, still-born, showing a development of six months. No hemorrhage during delivery. Placenta was removed and uterus contracted well. After delivery patient grew very restless; pulse 160 and thready. Whiskey, ether, and digitalis were given hypodermatically, foot of table elevated, lower extremities bandaged. Temperature 101°. Transfusion was performed, a saline solution being used. Pulse became temporarily better, but soon again flagged; the respiration became irregular, labored, and rapid, restlessness intense, and patient passed into an unconscious state and soon died.

CASE II. *Placenta Previa; Version; Transfusion.*—Æt. 33; ninth confinement. Patient brought by ambulance; had severe hemorrhage four weeks previous, which stopped without treatment. For two weeks past has been bleeding all the time more or less, and during that time has also had three floodings. On admission, pulse 140 and very feeble; respiration shallow, rapid, and labored; completely exsanguinated. Cervix was partially dilated, and placenta felt completely covering the os. Tampon was applied and a rectal enema of brandy administered. As soon as patient rallied a hand was passed into the vagina, the placenta separated from the os, the head pushed up from the lower segment of the uterus, one leg brought down, and the body delivered by traction upon this part. Both arms were extended over the head, causing some delay in the further delivery. Placenta came away spontaneously. During the operation whiskey was

given hypodermatically. Uterus contracted well and there was no hemorrhage during delivery. Radial pulse, however, became imperceptible, though the abdominal aorta could be felt pulsating 178 to the minute. Ether was now given by the skin and a rectal enema of brandy. Pulse improved temporarily. Foot of table was elevated, lower limbs bandaged, bags of hot water placed about the body, and a saline solution slowly injected into the right arm. In spite of all efforts she gradually sank into unconsciousness and died.

CASE III.—Æt. 18; primipara. Brought in by ambulance with vagina tamponed, having lost "a half-bucketful" of blood. Pulse 108 and barely perceptible; very restless; extremities cold. No fetal movements could be felt, no heart sounds heard. Some dribbling of blood in spite of tampon. As soon as she rallied from shock, tampon was removed; cervix was found dilated, and the placenta centrally implanted over os. Vertex presentation. Position R. O. A. Hand was passed into the vagina, two fingers introduced into the uterus and swept around without reaching edges of the placenta. Some bleeding now occurred. The forehead was pushed up, and as the knee came within reach the placenta was bored through on the left side, the knee seized, the leg brought down, and the delivery completed. The child was still-born. A hot intra-uterine douche of bichloride solution (1:20,000) was given. The uterus was held for two hours, and then a full dose of morphine was administered hypodermatically. Mother made a good recovery.

CASE IV.—Æt. 22; primipara. Patient gave a history of having had two floodings. On examination placenta could be made out, occupying the lower uterine segment. A Barnes' bag was introduced, of the smallest size, which was expelled in forty-five minutes; the next larger was inserted through cervix, and came away in one and three-quarter hours; the largest remained in position one hour and thirty-seven minutes. The cervix now being sufficiently dilated, the hand was introduced into the vagina, a bimanual version performed, and both feet brought down. The placenta was expelled before the child, which was still-born. The uterus contracted well and there was no further hemorrhage. Mother made a good recovery.

The plan of treatment of placenta previa adopted is to turn as soon as one or two fingers can be passed through the cervix, employing the well-known method of Braxton Hicks—combined external and internal version—and bringing down a leg, to tampon with it the bleeding vessels. The membranes are ruptured at the placental margin where this is possible; but where this cannot be done, the placenta is bored through and the leg pulled down.

ECLAMPSIA.

Four cases occurred, or 1 in 250. In two the convulsions came on before labor, in two during labor; in one of the latter the fits continued after delivery. One mother died. The urine was albuminous in all the cases. In one (vide Case IV., Induction of Labor) there were twenty-six convulsions, the children—premature twins—being still-born. In the three other cases the children were born living.

CASE I.—Æt. 21; primipara. On admission urine was examined and found non-albuminous. Four hours afterward the membranes ruptured spontaneously, and, with the occurrence of the first strong uterine contraction, patient had an eclamptic seizure lasting five minutes. The urine passed after the fit contained about thirty-five per cent of albumin. Pulse 130, tension high. The cervix was dilated by Barnes' bags, the patient being kept moderately under chloroform. As soon as dilatation was sufficient, forceps were applied, and a living male child, weighing seven pounds, delivered. Convalescence was uninterrupted until the seventh day, when a second convulsion occurred, of an epileptiform character, followed by unconsciousness and stertorous breathing. Pupils contracted, pulse rapid and of high tension. Five hours afterwards a third fit occurred, lasting twenty minutes. Chloral was administered. After this there was no return of the convulsions, and the mother made a good recovery. In this case albuminuria did not develop until after the first fit.

CASE II.—Æt. 21; primipara. Patient had noticed edema of face and hands for three weeks; had some visual disturbances and headache. Her urine, on admission, contained thirty per cent of albumin, hyaline and granular casts. The membranes were ruptured and labor began soon after, the

pains steadily increasing in frequency and force. Fifteen grains of chloral were given and repeated. As os dilated slowly and the fetal heart sounds were faint, chloroform was administered, the cervix was forcibly dilated, the forceps were applied, and a living child delivered without difficulty. Hot douche of bichloride solution (1:10,000) was then given and patient put on a milk diet. Ten hours after delivery symptoms of eclampsia were developed, with great restlessness, and a convulsion occurred, followed in an hour by a second one. Morphine was given hypodermatically and patient placed in a hot pack for three and a half hours. After removal she sank into a muttering delirium, with muscular twitchings all over the body, the eyes being turned up so that only the whites were visible. Pulse 88; temperature 98°; respiration 24. During following day delirium continued, and towards evening she had another fit. Temperature rose to 101°. Urine was freely secreted, having a specific gravity of 1.005, with only a trace of albumin. A dose of elaterium was given and she was again placed for three hours in a hot pack. After this there was no return of the convulsions and no interruption to convalescence. She left the hospital on the sixteenth day following confinement.

CASE III.—Æt. 28; fourth confinement. Patient had been in the hospital nearly two months, acting in the capacity of a servant while awaiting confinement, and her urine examined regularly every week; no albumin had ever been found. After she had been in labor fourteen hours, with membranes intact and fairly good pains, she suddenly had an epileptiform convulsion, which began with a turning-in of the thumbs, rolling of eyeballs, frothing at the mouth, and grinding of the teeth, with tonic and clonic spasms followed by coma. The membranes were at once ruptured, and a living child was born in about five minutes without assistance. Hemorrhage was slight. Ten minutes afterward a second convulsion occurred. Chloroform was administered and the placenta expressed. Eight ounces of urine were drawn off by catheter, containing nearly twenty-five per cent of albumin; microscopic examination revealed the presence of many granular casts. A quarter of a grain of morphine was given hypodermatically. Patient soon had another fit. Thirty

grains of chloral were given per rectum. Convulsions occurred at intervals of about forty-five minutes, and the coma gradually deepened. Dry cups applied over the kidneys and a dose of elaterium administered. Pulse after the eleventh convulsion was rapid; arterial tension high; temperature by rectum, 106° . The fits continued in spite of treatment, there being eighteen in all. Antipyrin was freely given, but the reduction of temperature was only one degree. In a few hours the patient died. The temperature post mortem was 108° .

In this case the albuminuria first appeared after the convulsion.

POST-PARTUM HEMORRHAGE.

The total number of cases of hemorrhage after delivery was fourteen, or nearly one in seventy-one, or 1.4 per cent. All of the mothers recovered, and only one of the children was still-born. In all the cases ergot was given, in the form of fluid extract, by the mouth, and in three cases ergotin hypodermatically. In four cases, after the failure of the ordinary means, vinegar was applied to the interior of the uterus, with the invariable result of arresting the bleeding and securing uterine contraction. The method of using it is as follows: A piece of gauze or absorbent cotton is saturated with the vinegar, carried with the hand into the uterus, and then squeezed, the vinegar flowing over the sides of the cavity, causing the muscle to instantly contract. This is a remedy of the highest value. Ice was used four times by vagina, with not satisfactory results. The hot intra-uterine douche (temperature 120°) was used in every case, and usually found efficacious. In eleven cases the hand was passed into the uterus to remove clots, and also for its stimulating influence upon the uterine muscle. Squeezing and manipulation of the uterus was always employed, and pressure kept up through the abdominal wall for a long time after the cessation of the bleeding, in one desperate case for three hours. The quantity of blood lost varied in these cases from two to four and a half pounds. Special report is given of one case.

CASE I. *Adherent Placenta*.—Et. 34; fourth confinement. Labor normal and easy, of three hours and twenty-five minutes' duration in the first stage and twenty-five

minutes' in the second. All went well until the child was born, when hemorrhage set in. Repeated efforts to express the placenta were ineffectual. Hand was introduced and placenta found firmly adherent, except at the lower margin. Patient became blanched from the loss of fifty ounces of blood, very restless, and extremities cold. Placenta was detached, but uterus was in an atonic condition, and was only kept contracted by squeezing and pressure. Hot intra-uterine douche given. No further hemorrhage. Foot of table was elevated, hot bottles applied to extremities, lower limbs banded, and whiskey given hypodermatically. Uterus was held for three hours before binder was applied. The child, a female, was alive and weighed seven pounds twelve ounces. Patient made a good recovery.

RUPTURE OF UTERUS.

One case occurred, or one in one thousand, details of which are here given.

CASE I. *Transverse Presentation; Impacted Shoulder; Ante-partum Hemorrhage; Rupture of Uterus; Death.*—Æt. 35; fourth confinement. Patient was brought to the hospital by ambulance in a moribund condition, having been in labor three days and suffered from profuse hemorrhage. On admission was still bleeding; no radial pulse; extremities cold. The shoulder was impacted, and the arm and hand protruded from the vulva. Hypodermatic injections of whiskey, digitalis, and ether were given, the shoulder pushed up, a foot seized, and a still-born child easily delivered. Bleeding continued in spite of every means employed to arrest it, and the patient died in twenty minutes after admission. Autopsy revealed a rupture of the uterus, evidently due to the long compression between the pelvis and the shoulder before patient entered the hospital. There was no uterine contraction after delivery, the womb remaining flaccid and atonic.

PUERPERAL MANIA.

There was only one case. The patient's age, 26; third confinement; a native of the East Indies. Her labor was normal; duration, twelve hours thirty-two minutes. Child alive, small, but well nourished.

On the second day after delivery she developed symptoms of insanity, was restless and sleepless, insisted on going home, and had hallucinations and delusions. No pyrexia. It was ascertained from friends that she suffered in a similar way after the birth of her last child, and did not recover for six weeks. She was removed to an asylum for the insane six days after confinement.

TRANSVERSE PRESENTATION; SPONTANEOUS EVOLUTION.

CASE I.—Æt. 31; twelfth pregnancy. Patient began to menstruate when 11 years of age. Has given birth to seven living children, and had three miscarriages in succession. In three of her labors there was a "cross-birth." Brought in by ambulance, having been in labor four hours, during which time a midwife had administered a large dose of ergot, and the ambulance surgeon gave her ten minims of Magendie's solution hypodermatically. The left arm and funis were found presenting and the uterus in a state of tetanic contraction about the child. Chloroform was administered, and delivery took place by spontaneous evolution, the head remaining fixed in its original position, while the fetus rotated about the point where the neck was jammed against the pubes, the body being doubled up upon itself. The labor occupied in all four hours fifty minutes. Perineum and cervix were intact. Child was dead, ecchymosed, not macerated, premature, weighing four pounds two ounces. Hot bichloride douche (1:10,000) was given. Patient rapidly convalesced and left hospital on ninth day.

LABOR IN A VERY YOUNG PERSON.

Miss —, æt. 12 years and 10 months, had hip-joint disease when 5 years of age, and has always been sickly; was an inmate of St. Luke's Hospital for three years, and had several operations performed. Menstruation began in her eleventh year, since which time she has been "regular," being unwell two days. Nine months ago she became pregnant by her brother. On admission, general condition anemic; partial ankylosis of both hip-joints, most marked on left side; pelvis normal; labia majora very small, labia minora large; vulvar orifice diminutive. The labor was natural; the child

presented by the vertex, in the first position. The cervix dilated slowly. First stage of labor occupied twenty-five hours thirty-five minutes; the second, twenty-five minutes; the third, fifteen minutes. The child was a male, weighing



FIG. 3.—Pregnancy with pendulous abdomen.

seven pounds two ounces. The cord was eighteen inches long. Placenta weighed one pound one ounce and had undergone some calcareous degeneration. After delivery the cervix was found to have a deep laceration on the left side; the perineum was also torn and the labia minora lacerated

transversely. The perineal wound was closed by sutures. Patient suckled the child, and made a good recovery. Her infant, being unusually comely, was taken for adoption, and the girl soon afterward returned to school.

LABOR WITH PENDULOUS ABDOMEN.

CASE I.—Et. 27; third confinement; previous labors normal. On admission, abdominal walls much relaxed, pelvis

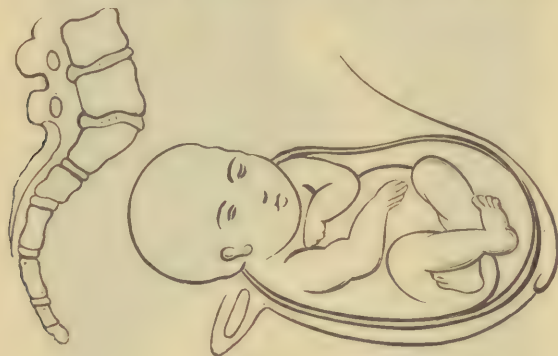


FIG. 4.

normal, uterus hanging down in front of pubes, the fundus reaching to a point opposite the middle of the thigh.



FIG. 5.

The position of the child is shown in Figs. 3 and 4, patient being in the erect posture.

Upon the advent of labor patient was placed on her back and the uterus restored to its normal position. The first stage of labor occupied sixteen and a half hours, the second ten minutes, the third fifteen minutes. Child weighed nine pounds ten ounces.

Fig. 5 shows the position of the uterus after the malposition had been rectified. Mother and child did well.

As there has occurred no case of mastitis or mammary abscess, it may be of interest to describe the management of lactation, since the freedom of patients from inflammation of the breasts is believed to be due to the method of treatment.

The breast binder (Fig. 2) is used on all patients; it holds the breast well up on the front of the chest, and exerts compression if there is overdistention. It is made of unbleached muslin and pinned from below upward. The child is allowed to nurse, not over twenty minutes, once in two hours during the day and once in three hours during the night. The nipples are washed with a saturated solution of boracic acid before nursing, and again after the removal of the child; they are then rubbed with a few drops of alcohol (fifty per cent), and thickly covered with a powder composed of equal parts of bismuth subnitrate and salicylic acid, and covered with a piece of lint. The mouth of the infant is thoroughly washed with a saturated solution of boracic acid before and after each suckling. Fissured nipples are touched with a solution of silver nitrate (gr. xl. to $\frac{3}{4}$ i.), and if eroded they are protected by the use, during nursing, of Ware's nipple shield.

TABLE OF FATAL CASES.

Chronic Bright's disease.	1
Rupture of the uterus.	1
Placenta previa.	1
Placenta previa with contracted pelvis.	1
Eclampsia.	1
Septicemia.	1
Total.	6

An analysis of these cases shows that in one instance death was due to chronic organic disease and not to labor; in another the patient was moribund when taken from the ambulance; in a third—a case of placenta previa—the fatal

termination was owing to delay in procuring medical assistance, the woman having nearly bled to death before coming to the hospital. There was one death from puerperal septicemia. This patient was admitted in the second stage of labor, in a most filthy condition, having been examined at her home, and, from her symptoms and temperature, was believed to be in a septic condition when she entered the hospital.

There were six deaths among the one thousand cases—one in nearly one hundred and sixty-seven, or 0.6 per cent. Taking into consideration the character of the service; the large number of emergency cases brought to the hospital by ambulance, many of them well advanced in labor; the bad condition of many on admission, owing to neglect or unskilful treatment, the record of mortality is very satisfactory. The result is due to a combination of measures looking to the safety of the patients, each having a certain value of its own, and in the aggregate producing a very low death rate. The small size of the wards, their use in rotation, the scrupulous care exercised to guard against all sources of infection from without and within, the skilful nursing, the free use of antiseptics, the strict cleanliness enforced, and the lavish supply of fresh air, are, it is believed, in great degree accountable for these results.

